

I CLAIM:

1. In a primary access device connecting a first network to a second network over a primary connection, a method for providing a backup connection between said first network and said second network, said method comprising:

detecting a failure in said primary connection;

receiving, at said primary access device, a data packet originating from said first network and having a destination address at the ISO datalink layer 2;

replacing, in said data packet, said destination address with a backup access device datalink address identifying a backup access device capable of providing said backup connection;

whereby said replacing of said destination address with said backup access device datalink address enables a transmittal of said received data packet to said second network over said backup connection.

2. The method as claimed in claim 1, wherein said first network is a local area network (LAN).
3. The method as claimed in claim 2, wherein said second network is a wide area network (WAN).
4. The method as claimed in claim 3, wherein said local area network is an Ethernet-like network.

5. The method as claimed in claim 4, wherein said wide area network is an IP-based network.
6. The method as claimed in claim 5, wherein said data packet is an domain name server request.
7. The method as claimed in claim 4, further comprising performing an ARP request and further wherein said backup access device datalink address is provided by said backup access device in response to said ARP request.
8. The method as claimed in claim 5, wherein said backup access device IP network station address is provided to said primary access device at a predetermined time.
9. The method as claimed in claim 5, wherein said primary access device comprises domain name server relay and cache service, further comprising emptying said cache after said detecting of said failure in said primary connection.
10. The method as claimed in claim 5, further comprising creating a direct ISO layer 2 datalink connection between said primary access device and said backup access device and further providing said data packet having destination address replaced with said backup access device address to said backup access device using said direct ISO layer 2 datalink connection.
11. A backup system for providing a backup connection between a first network and a second network in response to a failure of a primary connection between

said first network and said second network, said backup system comprising:

a backup access device for providing said backup connection and having a device address at the ISO layer 2 datalink layer;

a primary access device, connected to said backup access device, providing said primary connection between said first network and said second network and, in response to said failure, replacing the destination address of an incoming data packet, at said datalink layer, with said backup access device datalink address;

whereby said replacing of said destination address with said backup access device address enables the transmittal of said data packet to said second network over said backup connection.

12. The backup system as claimed in claim 11, wherein said primary access device and said backup access device are connected using an Ethernet network.
13. The backup system as claimed in claim 11, wherein said first network is a local area network (LAN).
14. The backup system as claimed in claim 11, wherein said second network is a wide area network (WAN).
15. The backup system as claimed in claim 11, wherein said primary access device further comprises a domain name server relay.

16. The backup system as claimed in claim 11, wherein said primary access device further comprises a DHCP server.